

Claims

1. A vaccine composition comprising an antigen bearing target and further comprising a fusion polypeptide, said fusion polypeptide comprising a first amino acid sequence which can bind to a carbohydrate and a second amino acid sequence comprising a ligand for a cell surface polypeptide of a leukocyte, wherein said vaccine composition comprises said fusion polypeptide bound to a carbohydrate on said antigen bearing target and further comprises some of said polypeptide which is not bound to said antigen bearing target.
2. The vaccine composition of claim 1, wherein said ligand is chosen from the group: a ligand for a cytokine receptor, a ligand for CD40, a ligand for an adhesion molecule, a ligand for a defensin receptor, a ligand for a heat shock protein receptor, a ligand for a T cell costimulatory molecule, a ligand for a counterreceptor for a T cell costimulatory molecule, a ligand for an opsonin receptor.
3. The vaccine composition of claim 2 wherein said ligand comprises at least about five contiguous amino acids of a naturally occurring cytokine, said cytokine being chosen from the group: GM-CSF, an interleukin, a chemokine, an interferon, a TNF-alpha, a flt-3 ligand.
4. The vaccine composition of claim 2 wherein said ligand comprises at least about five contiguous amino acids of a naturally occurring CD154 molecule.
5. The vaccine composition of claim 1, wherein said antigen bearing target is chosen from the group: a tumor cell, a virus, a bacterial cell, a fungal cell, a cell of a parasite,

a prion, a mammalian cell, an insect cell, a polypeptide free of other cell-derived material.

6. The vaccine composition of claim 5, wherein said antigen bearing target is pathogenic.
7. The vaccine composition of claim 5, wherein said antigen bearing target is attenuated.
8. The vaccine composition of claims 1, wherein said antigen bearing target is a cell which is substantially unable to divide.
9. The vaccine composition of claims 1, wherein said leukocyte is an antigen presenting cell.
10. The vaccine composition of claim 9, wherein said leukocyte is a professional antigen presenting cell.
11. The vaccine composition of claim 9, wherein said leukocyte is a dendritic cell.
12. The vaccine composition of claim 1, wherein said first amino acid sequence can bind to a sialic acid on a glycoprotein.
13. The vaccine composition of claim 1, wherein said first amino acid sequence comprises a carbohydrate-binding domain of a naturally occurring lectin.